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Familiarity of Selected Health Terms

By JEANNE CHALL AND EDGAR DALE

SPECIALISTS in reading have long known that vocabulary is one of the most important factors in reading difficulty. Hence we find that every readability formula which attempts to predict the comprehension difficulty of reading materials uses some measure of the difficulty of the words.[1] Vocabulary difficulty can be estimated in many ways. It can be measured by checking the words in the material against frequency word counts[2] to determine the relative number of uncommon or hard words, or by checking against words known or used by children at various grade-levels,[3] or by the relative number of syllables per hundred words.[4]

Frequency counts, familiarity word lists, usage word lists, and syllable counts have in turn been used by those who wish to write materials within the comprehension of specified grade-levels in school and designated educational segments of the adult population. These measures of vocabulary difficulty help the writer or editor to select the general vocabulary suitable for his prospective readers. They are less helpful, however, to the writer of specialized materials, for he finds few of the technical terms which he needs to use on any of the lists. Are the health terms *tuberculosis, cancer, lung, tissue, organ* known to the average adult reader? These are significant terms in

[1] Lorge, Irving. "Readability Formulae: an Evaluation," *Elementary English*, XXVI (February, 1949), pp. 86–95.

[2] *See* Thorndike's *Teacher's Word Book of 20,000 Words* (New York: Teachers College, Columbia University, 1931) *and* Lorge and Thorndike's *Teacher's Word Book of 30,000 Words* (New York: Teachers College, Columbia University, 1944); *and* Dale, Edgar, "A Comparison of Two Word Lists," EDUCATIONAL RESEARCH BULLETIN, X (December 9, 1931), pp. 484–89.

[3] *See* Rinsland, Henry D., *A Basic Vocabulary of Elementary School Children* (New York: Macmillan Company, 1945) *and* the Dale List of 3,000 Familiar Words found in "A Formula for Predicting Readability: Instructions," EDUCATIONAL RESEARCH BULLETIN, XXVII (February 18, 1948), pp. 45–54.

[4] Flesch, Rudolf. "A New Readability Yardstick," *Journal of Applied Psychology*, XXXII (June, 1948), pp. 221–33.

health-education materials, yet the writer must hazard a guess as to his readers' knowledge of them. The importance of a correct guess was shown as early as 1934 by Dale and Tyler in a study of the factors involved in comprehending health materials. They found that different technical terms contributed most to the difficulty in reading comprehension.[5]

If writers and editors in health education, or, for that matter, in any specialized area, are to have help in making themselves intelligible to the lay reader, they need some objective evidence of his familiarity with the technical words they use. This article presents the methods and results of a project to determine the familiarity of selected health terms among children and adults. The project was one of several sponsored by the Educational Survey of the National Tuberculosis Association during the years 1944 through 1949. One of the objectives of the Educational Survey was an evaluation of existing materials and a determination of how important facts about tuberculosis should be presented so that various groups would understand and carry out health suggestions.

We report, in detail, the methods used in establishing the familiarity of the health terms, with the hope that other researchers will find them helpful in compiling more comprehensive health lists or lists in other special fields. Writers and editors who are interested only in the difficulty of various health terms among adults may refer to the list given in Table II of this article. Those interested in the difficulty of health terms among junior– and senior–high school students may write to the authors for mimeographed lists of such terms.

To IDENTIFY the technical words and phrases and the extent of their use in the popular writings of the National Tuberculosis Association, all significant health words and phrases in ten pamphlets were underlined and tabulated. These ten pamphlets contained 715 different technical health terms, ranging in frequency of use from 103 times for *t.b.* to one time for words like *arrested disease, congestion, lymph canals.* Approximately 62 per cent of the technical health terms used in the ten pamphlets appeared only once; about 19 per cent, twice; 9 per cent, either three or four times; 6 per cent, from five to nine times; 2 per cent, from ten to twenty-four times;

[5] "A Study of the Factors Influencing the Difficulty of Reading Materials for Adults of Limited Reading Ability," *Library Quarterly,* IV (July, 1934), pp. 384–412.

1 per cent, from twenty-five to ninety-nine times; and less than 1 per cent, over one hundred times.

Our next steps were: first, to determine the importance of these terms for the health education of the layman, with particular emphasis on tuberculosis education; and second, to decide upon a method of testing to what extent these health terms were familiar to groups of representative readers.

Although the frequency of appearance of words is usually a good indication of their importance, in the case of these pamphlets, this did not hold true. Some words and phrases which seemed particularly important in writing on tuberculosis were used only once or twice.

We therefore asked the staff members of the National Tuberculosis Association (N.T.A.) for a list of the terms which they thought were important for health education. We received a list of 60 words, which included such terms as: *cough, sputum, open t.b., t.b. germ, allergy, X ray.* From this list, the most frequently used words in the 715 different health terms found in the ten popular pamphlets, and a careful study of existing health word lists, we selected various groups of words which were tested on children and adults to determine to what extent they were known. Thus our method of selecting words for testing was based on a combination of objective evidence of importance (frequency of appearance in a sample of the popular literature of the N.T.A.), the judgment of workers in tuberculosis education, and the findings of previous research on the importance of various health terms.

MANY methods of determining the difficulty or familiarity of words were available and had been used in general vocabulary testing. One of the simplest was to determine whether a group of readers knew a particular word by just asking them whether they knew it or did not know it. This method of determining word knowledge would merely necessitate our duplicating a list of the health words in which we were interested and having groups of representative readers check the words that they knew. Then we would tabulate the number who knew each word. From this type of testing we would get results like this: 100 per cent of junior–high school students tested knew the word *poison*—they all checked it as known; 31 per cent knew the word *sputum.* From these data we would conclude that *poison* was a familiar word to junior–

high school students. It could be used with no explanation in books and pamphlets on health for junior– and senior–high school students. On the other hand, *sputum* was relatively unfamiliar and would need an illustration or explanation if used.

Is this method valid for determining pupils' knowledge of words? Washburne and Morphett,[6] Dale,[7] Curtis,[8] and Annen[9] found high correlations—as high as .8 and .9—between the judgments of children as to whether they knew a word and their multiple-choice test responses on such words. Whipple[10] and Kirkpatrick,[11] however, called attention to the pupil's tendency to overestimate his knowledge and to the confusion caused by resemblances in spelling. We would expect, then, to find a larger percentage of children checking a word as known than actually know it on a multiple-choice test. We would also expect to find larger percentages checking difficult words as known when the spelling of these words resembles that of more familiar words.

This method of testing is economical. It demands no skill in test construction. It requires little time for the subjects to take the test and it is simple to score. Hence we used this method most frequently.

A second method of testing knowledge of a word is used widely in standardized reading and vocabulary tests. The person taking the test is asked to pick out the correct meaning, or a synonym, from a group of four or five synonyms or definitions. This method is much more costly and time-consuming than the checking test. It requires careful construction of alternatives and correct responses. If fine discriminations in meaning differentiate the correct from the alternative responses, even the simplest words may be missed by those who may know the word well enough to understand it in context. The multiple-choice method of testing usually requires pre-testing of the

[6] "A Simple Technique for Determining Whether Children Know the Meaning of Spelling Words," *Journal of Educational Research*, XIX (March, 1929), pp. 196–200.

[7] "Familiarity of 8,000 Common Words to Pupils in the Fourth, Sixth, and Eighth Grades." 1935. Mimeographed. (Supply exhausted).

[8] *Investigations of Vocabulary in Textbooks of Science for Secondary Schools.* Boston: Ginn and Company, 1938.

[9] "The Construction, Analysis and Evaluation of a Vocabulary Measure." Master's thesis on file in the library of the University of Oregon. 1933. [Cited by Robert H. Seashore and Lois D. Eckerson in "The Measurement of Individual Differences in General English Vocabularies," *Journal of Educational Psychology*, XXXI (January, 1940), pp. 14–38].

[10] "Vocabulary and Word-Building Tests," *Psychological Review*, XV (January, 1908), pp. 94–105.

[11] "A Vocabulary Test," *Popular Science Monthly*, LXX (February, 1907), pp. 157–64.

questions. It takes longer to administer and score than the method of merely checking the words as known or unknown. The multiple-choice method was also used, but not so widely as the first.

A third method, that of asking the respondent to give his own definition of the word, is used less frequently in wide-scale testing. However, it is probably the most revealing since it gives an indication not only of whether he knows or does not know the word, but also of his misconceptions of the meaning of the word. This method is expensive. While no skill in test construction is involved, the scoring is difficult and largely subjective. We used this method for a limited number of words.

SINCE the testing program continued throughout the four-year period, 1945 to 1949, we shall try to outline only the major findings.

The first test—Key Concepts in Tuberculosis—consisted of 17 crucial terms used in the literature on tuberculosis. These words were among those most frequently used in the ten pamphlets checked and those believed to be highly important by the N.T.A. staff.

Approximately four hundred children in Grades VI through XII in several schools in Ohio and North Dakota[12] were asked to write out the best definitions for these 17 terms. The words and the percentages of those pupils who gave satisfactory definitions of each word are listed in Table I.

In general, the key terms were known fairly well by the students tested. From the seventh grade on, only the words *sputum*, *symptoms*, and *infection* gave the pupils some difficulty. What we actually learned from this test, however, cannot be seen from the tabulation alone. We read each definition carefully and marked the responses either "excellent," "good," "fair," "poor," "wrong," "don't know," or "no answer." Table I is a combination of the excellent, good, and fair responses which were classified as satisfactory. But, like all tabulations and classifications, it does not convey the more subtle findings. We learned a great deal about the extent of confusion that exists in pupils' conceptions of some of the most important words in health education.

For example, the word *symptoms* received such definitions as the following: "symptoms are the causes of certain diseases,"

[12] Canal Winchester, Dover, and Massillon, Ohio, and Rugby, North Dakota.

"is what you do to prevent tuberculosis," "is a cause," "is a disease cough from tuberculosis," and "is a thing which happens after you are sick."

Even the word *cure*, which was known by most of the students in all the grades tested, received such definitions from some of the students as: "what you are after you are sick," "is what a doctor does when you are sick," and "it means that the doctor or person that helps you may be cured."

It should be quite clear that a person may know enough about the meaning of a word to make a satisfactory response to written materials without being able to define it accurately. Thus, a limited understanding may be sufficient for the purpose.

TABLE I

PERCENTAGE OF PUPILS GIVING SATISFACTORY DEFINITIONS

Key Concepts in Tuberculosis	Grades*					
	VI	VII	VIII	IX	X	XII
1. *germ*	63	72	100	91	97	95
2. *sputum*	29	45	42	21	13	45
3. *disease*	53	72	79	87	94	80
4. *tuberculosis*	50	79	89	90	95	85
5. *sanatorium*	53	70	100	93	97	95
6. *doctor*	95	91	100	100	99	100
7. *symptoms*	24	63	55	63	67	95
8. *t.b.*	72	90	100	89	98	100
9. *contagious*	39	72	95	77	88	95
10. *lungs*	68	72	92	91	88	90
11. *X-ray picture*	66	71	92	70	81	80
12. *cure*	74	77	92	94	89	100
13. *infection*	55	60	89	68	73	80
14. *physician*	58	71	95	83	96	100
15. *tuberculin test*	39	73	87	90	85	100
16. *patient*	71	86	97	90	96	95
17. *treatment*	42	77	84	84	95	100
Number of pupils	38	110	38	86	65	20

* The percentages of pupils giving satisfactory definitions tend to increase as they advance in school. The few irregularities are probably due to sampling errors. If this test were repeated on similar groups of children, we would expect the percentages to fall within ten percentage points above or below those which this table shows by chance alone.

THE second large testing program was the administration of a list of 476 health terms to a group of approximately 550 pupils in Grades VII–XII who were asked to check the words they knew.[13] These terms were the most important of the 715 tabulated from the ten popular N.T.A. pamphlets and some

[13] Canal Winchester, Dover, and Massillon, Ohio; Gillespie Junior High School, Philadelphia; and Rugby, North Dakota.

general health terms found in several health word lists. The results were tabulated—first by percentages within each grade who knew each of the words, and then by the percentages of junior– and senior–high school pupils who knew them.

Of the 17 words on the Key Concepts Test, 14 were in the more extensive checking test on 476 terms. We were able, then, to compare the performance of similar grades on the two tests. For almost every word, we found larger percentages of those "knowing" on the checking test. For example, the word *symptoms* was checked as known by 76 per cent of the junior–high school students, although only 60 per cent were able to give satisfactory definitions of it. Ninety-six per cent of the senior–high school students marked *symptoms* as known, although only 81 per cent were able to give satisfactory definitions. For some of the words, the differences were only a few percentage points—differences that we would normally expect if a group of pupils had taken the same test again.

The average discrepancy for the 14 words was about 11 per cent. That is, on the average, we would expect 11 per cent of the pupils to check a word as known although they could not give a satisfactory definition of it on the Key Concepts Test. The tendency to overestimate was greater for those words which were not very widely known; for example, *symptoms*, *sputum*.

The list of 476 health terms with the percentages of junior– and senior–high school students who marked each word as "known" cannot be reproduced here, but mimeographed copies of the list can be obtained by writing to the authors.

IN THE third large-scale testing program 150 adults who averaged approximately six years of schooling were tested.[14] Two tests were administered—a 50-item multiple-choice test on some of the most important words from the larger list of 476 and a checking test on an additional 328. The percentages knowing (on the check test) or correct (on the multiple-choice test) were tabulated for each of the words tested. The final list of words, with familiarity ratings and suggestions for using the list,[15] are found in Table II.

[14] *See* Dale, Edgar, and Hager, Hilda. *Some Suggestions for Writing Health Materials*. New York: National Tuberculosis Association, 1950. pp. 30–31.

[15] Inmates of the Ohio Penitentiary and members of the Urban League, Columbus, Ohio.

TABLE II

Familiarity of Selected Health Terms among Adults

A Words—Words that are known by more than 90 per cent of the persons tested:

appendix	ether	lung	relaxation
appetite	examination	measles	serious
aspirin	examine	medical	skeleton
blister	exercise	medicine	smallpox
blood pressure	exhale	mumps	spine
brain	fainting	muscles	splint
breakdown	fever	nerve	starch
bruise	filth	nervousness	stomach
cancer	first aid	operation	surgeon
checkup	flu	organs	surgery
chest X ray	gland(s)	oxygen	surgical
chicken pox	gums	patient	t.b.
cramp	gymnasium	physical examination	temperature
decay	healthful	physician	tobacco
diet	heartburn	poison(s)	tonsil
digestion	hospital	pore	treatment
digestive	hygiene	pregnancy	tuberculosis
diphtheria	indigestion	prevent(ed)(ing)	underweight
disease	inhale	pulse	vitamins
diseased lung	inhaling	pus	vomit
dizziness	iodine	rash	whooping cough
drug	kidney	raw milk	X ray
eardrum	lens	recreation	X-ray examination
enamel	liver	regular	X-ray picture

B Words—Words known by about 76 to 90 per cent of the persons tested:

abdomen	dislocation	nicotine	sprain
appendicitis	disposal	pasteurize	sterilize
artery	epidemic	patent medicine	suffocate
balanced diet	exhaustion	perspiration	tuberculous
bicarbonate	fracture	physic	unconsciousness
bladder	gargle	pneumonia	vaccination
bowel(s)	germ	posture	vein
cell	hoarseness	professional	ventilation
circulation	hospitalization	quarantine	vision
clinic	indigestible	recovered	well-balanced meals
contagious	infantile paralysis	recovery	yeast
curable	intestine	refrigeration	
diarrhea	laboratory	rheumatism	
disinfect	malaria	sanatorium	

C Words—Words known by about 56 to 75 per cent of the persons tested:

abdominal	clot	fatigue	narcotic
abscess	constipation	hemorrhage	nutrition
adenoids	consult	hookworm	offspring
adhesive	consumption	humidity	opium
anesthetic	contact	hypodermic	paralysis
antiseptic	diabetes	infection	pasteurization
artificial respiration	diagnosis	inflammation	persistent
bacteria	diaphragm	influenza	precaution
body tissue	disabled	inherited	protein
bunion	discharge	injurious	reaction
carbon dioxide	disinfection	invalid	rehabilitation
carbon monoxide	exertion	isolate	reinfection
cavity	exposure	isolation	relapse

resistance
respiration
rickets
safeguards
saliva
scalded
sensitive
serum
spasms
sterilization
tapeworm
t.b. of the bone
tuberculin test
typhoid
ulcer
vaccine
valve
vitality

D Words—Words known by about 31 to 55 per cent of the persons tested:

absorption
active tuberculosis
acute
adulterate
allergy
anemia
antidote
antitoxin
arrested disease
asthma
astigmatism
bronchial tubes
bronchitis
caffeine
callous
calorie
carbohydrate
catarrh
chronic
cocaine
communicable
competent
congestion
consultation
contaminate
convalescence
convulsion
corpuscle
delirium
disability
elimination
enema
fatalities
flare-up
fumigate
gangrene
goitre
grippe
hydrophobia
immune
impurities
infectious
inoculate
insomnia
larynx
living organism
malnutrition
mass X-ray surveys
microbe
negative sputum
nucleus
oculist
pollution
positive tuberculin test
post-sanatorium care
prolonged exposure
recurrence
roughage
scurvy
sinus
specific
sputum
stagnant
stethoscope
stimulant
strenuous
strychnine
symptom
t.b. of the bone and joints
thyroid
tissue
tonsillitis
tourniquet
toxin
urine
visual

E Words—Words practically unknown. Less than 30 per cent of adults with an average of six years of schooling will know them:

albumin
alimentary canal
aorta
assimilation
auditory
auricle
bacilli
bacillus
bilious
capillary
cartilage
case-finding
cathartic
cauterize
chromosomes
chronic bronchitis
coagulate
collapse the lung
collapse therapy
colon
contracted lung
critical stage
diabetics
diagnostic clinics
dissipate
dysentery
dyspepsia
embryo
emetic
eustachian tubes
ex-patients
fermentation
gastric juice
germicide
hemoglobin
heredity
immunity
immunization
lymph
lymph canals
lymph node
mass tuberculin testing
mastoid
microscopic parasites
minimal disease
mucous
mucous membrane
nausea
neuralgia
non-pulmonary t.b.
open t.b.
pancreas
pathogenic
pelvis
periodic
peristalsis
pharynx
pituitary
pneumothorax
positive reaction
positive sputum
prostration
protoplasm
ptomaine
pulmonary t.b.
pyorrhea
reactivation
roentgenologically
sanatoria
secretion
sedimentation tests
streptococcus
tendon
thoracoplasty
tic
toxic
tubercle
tubercle bacilli
urinary tracts
ventricle
vermin
vertebra
virus

It is not easy to formulate any specific rules for the use of the words listed in Table II. The writer should first prepare his rough copy without referral to the familiarity scores of words on this list. He will write as he normally does. Next he checks on the technical terms that he has used. This may be done by underlining them. If he is writing for a highly intelli-

gent, sophisticated, well-informed audience, the number of technical words can be much greater than if the writing is intended for adults of very limited education.

In writing for a "mass" audience, the writer should draw largely on the *A* words.[16] Most of his readers will know them; that is, they will recognize the word when they see it in print and will know something about it. For example, most of the adults we tested knew the word *tuberculosis*. However, we merely asked them to check one definition out of a possible four, the following being the correct choice: "Tuberculosis is a disease usually in the lung." To have a completely satisfactory understanding of the word *tuberculosis*, we should expect a person to know also that tuberculosis is caused by a germ, that it is catching, that he should have an X-ray examination to find out whether he has it, and so on. Therefore, when we say that a word is known by almost everyone, we mean that the word is recognized in reading and that the reader knows what you are writing about when you use the word.

The *B* words will be known by approximately 70 to 90 per cent of adult readers of the type tested. Such words can generally be used with safety. Beginning with the *C* words, however, the writer should ask himself whether a more familiar synonym might be used. For example, *fatigue* is a *C* word. Why not say *tired*? *Influenza* is also a *C* word. Would the word *flu* be a satisfactory substitute? There are some words that are so important that no substitute should be used for them; everyone ought to learn them. When you use such words, define them, explain them, or use them so that the reader will understand them by context. Sometimes a special glossary should be included.

The *D* and *E* words should be used with discretion. If they are important, use them, but explain them fully and repeat them often enough throughout the text so that the meaning will be entirely clear. Remember that we want our readers to learn new health words, to keep growing in knowledge and understanding of health principles. The able writer will include enough new ideas to challenge, interest, and inform, but not so many that the reader becomes frustrated and stops reading.

[16] More than 90 per cent of adult readers with an average of six grades of schooling should know these words when they see them in print.

A Test of the Pre-School Child's Familiarity with Measurement

By JOSEPHINE H. MACLATCHY

THE purpose of devising the test which is described in this note was utilitarian. I was asked by the editor of an issue of the magazine *Education* to write a short article on the pre-school child's familiarity with measurement. No objective evidence on the subject seemed available, so I decided to gather what information I could. From experience in devising a test to determine what six-year-olds know about number when they enter school, I was convinced that conversation with the individual child was essential. For this reason, a set of questions arranged logically by topics seemed the best way to lessen as much as possible the personality elements which the questioner would unavoidably contribute to an interview with a pre-school child.

I discussed my plans with Mrs. Cecil Swales, who is director of kindergartens in the University School, Ohio State University, and we drew up a preliminary form and questioned several five-year-olds. One boy knew all the answers, but there was a wide gap between his familiarity with measurement terms and that of some of the others questioned. The form finally arranged, therefore, was somewhat simplified. Twenty three-year-olds, 28 four-year-olds, and 25 five-year-olds have been questioned individually thus far. Most of them were enrolled in nursery schools and kindergartens in and near Columbus; a few children were tested in their homes.

It is difficult to know just how to reach a young child's familiarity with such recondite interpretations as those involved in measurement. For this reason, we decided whenever possible to devise two or three different questions each of which should receive the same answer, so that we could be confident whether or not the child knew the desired information. For example, in order to find out whether the child knows the time of day—morning, night, afternoon, and noon—we asked the following questions:

What time of the day is it when you get up and eat breakfast?
When is it dark outside?
or When do you go to bed?

When do you have lots of time to play?
or When do you (or little children) take your nap (their naps)?
or (for children who attend kindergarten in the afternoon) When do you come to kindergarten?

What time comes between morning and afternoon?
or What do we call the middle of the day?
or When does your mother come to take you home from kindergarten?

If the child answers the first of the two or three questions arranged to elicit one answer, the others are not asked. Our purpose is to be sure that the child who gives an incorrect answer or says "I don't know" has understood the question.

In devising the test we tried to avoid suggesting the desired answers. For this reason, whenever possible the first question asked in a topic block is inclusive. For example, in discussing the seasons the first question is: What time of year is this? If the child answers correctly, the next is: Do you know the other times of the year? If this question is answered adequately, the child is asked to describe each season. He is then asked questions to find out his familiarity with the succession of the seasons, such as: What time of year comes before summer? If, however, the child fails on the first question in the series just described, another group of questions, much more specific, is asked: What do we call it when you wear your snow suit and play with your sled? . . . when it is hot and you wear your sun suit? . . . when the leaves fall off the trees? . . . when the grass turns green? Time is the most exhaustively discussed topic in the test. Days of the week, names of the months, seasons, times of the day, and specific hours are included.

The child's familiarity with measurement is sounded by using, whenever possible, a common instrument of measurement. The questioner has an assortment of things on the table: a large calendar, a clock, a clock face with movable hands, yardstick, foot rule, cup and pint pitcher used in cooking, wall and clinical thermometers, quart, pint, and half-pint milk bottles, pieces of money from a penny to a dollar bill, a light bulb, and a small pitcher of water. These are used with specific questions whenever practical.

To find out what use the child can make of common measuring instruments, two practical tests are included. The first

[*Continued on page 222*]

The Problems of Two University Populations

By LEONARD V. GORDON

THE present paper reports the data obtained from two of the several problem surveys undertaken in conjunction with the development of the form of the Mooney Problem Check List prepared for adults.[1] The purpose of the survey was to collect, from several relatively homogeneous groups, responses to the items constituting the preliminary form of the Check List. This data was used for item-analysis purposes in the revision of the instrument.

The Problem Check List is designed to give an overview of the problems of an individual of which he is aware and which he is willing to admit. It comprises 288 problem statements, arranged in six major areas of 36 statements each and four areas of 18 statements each, which are printed horizontally across the page in groupings of six. The individual goes through the list vertically, underlining those statements which represent problems of concern to him.

The large majority of individuals, while marking the Check List, are unaware of the horizontal grouping of items by problem areas.[2] This format is desirable, for when items are obviously arranged by areas some persons are averse to marking too many problems in a particular area, and even tend to skip entire areas if some of the items are not to their liking.

On the back page the person taking the check list is afforded the opportunity to add any problems which are not included in the items underlined, and to make a summary of his principal problems. He may also list problems which he would like to discuss and may indicate his desire for counseling.

The general uses of the Check List are threefold:

First, as an aid in counseling

A counselor, by having the individual fill out the inventory prior to the interview, may obtain an idea of the client's problems, with leads as to probable interrelationships among them and possible areas of resistance.

[1] Gordon, Leonard V., and Mooney, Ross L. The Mooney Problem Check List (Adult Form). New York: Psychological Corporation, 1950.

[2] Gordon, Leonard V., and Mooney, Ross L. "A Note on the Organization of the Mooney Problem Check List," EDUCATIONAL RESEARCH BULLETIN, XXVIII (November 12, 1949), pp. 212–14.

Second, as an instrument for group surveys

Modal problems of particular populations may be determined as a basis for the development of facilities or other action to be taken. Common problems may yield discussion topics or serve as the basis for other program development within the group. Individuals needing special aid or wishing help may be screened out by the survey.

Third, as a research instrument

A few of the many possible uses which the Check List may serve are: to show relationships among particular problems and age, sex, and the like; to identify group differences; to evaluate the effects of a particular program; to indicate problem interrelations within a group.

THE two groups included in the present survey were the wives of student-veterans living in the G.I. Village at Ohio State University and single women students enrolled in daytime courses at Ohio State University. From a larger number, 75 Check Lists were randomly selected from each population for item analysis. Although the original purpose of the present survey was statistical, it is thought that the results here summarized may be of some general interest, both in indicating problem differences between the two groups, and in suggesting possible remediation.

The actual survey of the village group was performed by the president of the Women's Council of G.I. Village. Check Lists and sealable envelopes were distributed to all women present on a particular weekday afternoon. The Check Lists were to be filled out anonymously, and were to be collected in the sealed envelopes the following day. Only two young women refused to co-operate, although five returned Check Lists bearing no marks or data of any sort.

The University students who took part in the survey were enrolled in several sections of a beginning sociology course. Participation was voluntary, and only three per cent of the Check Lists were returned unmarked.

A fairly wide discrepancy in present economic status probably exists between the two groups. While the student group represented individuals of various economic levels, that of the village group might be safely stated as uniformly low. The same generalization might be made with respect to the housing conditions of the two groups.

Of the village group, 8 per cent were employed part time;

of the student group, 6 per cent reported part-time employment. The mean age of the village group was 25.8 years; that of the student group was 20.7 years. Ninety per cent of the village group had one or more children.

THE results of the item count for the two populations are reported by areas represented in the Check List. The modal items for each group are included, and items marked by significantly different percentages of each group are indicated by an asterisk.

The percentages of each group marking items of concern in the area Health are as follows:

Health

	Village	Student
1. Feeling tired much of the time	45	36
98. Frequent nose or sinus trouble	16	15
145. Troubled by headaches	13	12
147. Menstrual or female disorders	13	12
198. Not getting enough rest or sleep	19	35*
52. Poor complexion or skin trouble	9	16*
193. Having considerable trouble with my teeth	15*	8
244. Needing an operation or medical treatment	8*	1

Some of the differences between the two groups in the Health area apparently reflect economic differences. Not only is the student group better off financially on the average than the Village group, but medical consultation is free to the students but not to the veterans' wives.

In the Economic area, a significantly greater number of veterans' wives mark the item, "Not enough money for medical expenses." Statements inserted by the wives of veterans further indicate their inability to afford proper medical and dental care. These two items appear in the percentage summary of the items checked by the members of the two groups in the section of the Check List devoted to problems of economic security:

Economic Security

	Village	Student
10. Lacking privacy in living quarters	23	16
103. Needing financial assistance	15*	5
104. Can't seem to make ends meet	22*	3
106. Not having enough money for necessities	19*	1
151. Not enough money for medical expenses	8*	0
152. Too little money for recreation	19*	1
200. Having no systematic savings plan	18*	7
9. Lacking modern conveniences in my home	11*	1
57. Disliking financial dependence on others	12	19*
154. Unsure of future financial support	8	17*

The G.I. Village was developed to provide inexpensive, emergency housing, particularly for veteran students of low income, having families of one or more children. The marginal nature of the housing, both from the point of view of privacy and modern conveniences, is reflected in Items 9 and 10. Written-in statements indicate that the "lack of privacy" results largely from the paper-thin walls, and is, at times, disturbing and embarrassing. The "lack of privacy" defined by the student group is that commonly found in dormitory life. The present low-economic status of the Village Group is reflected in the items marked in this area and the number of items in which the differences have statistical significance. On the other hand, dislike of financial dependence upon parents and future insecurity are greater for the student group.

The area Self-Improvement is the most heavily marked in the survey. Almost all items in this area are marked by a substantial number of persons in one of the two groups. The percentage summary follows:

Self-Improvement

	Village	Student
162. Wanting to read worth-while books more	35	36
14. Wanting to improve myself culturally	22	21
15. Wanting worth-while discussions with people	23	17
13. Wanting to develop a hobby	11	8
205. Wanting more chance for self-expression	9	12
111. Wanting to improve my manners or etiquette	13	9
65. Trouble keeping up a conversation	13	17
63. Not using my leisure time well	24	21
109. Wanting to improve my mind	31*	20
110. Wanting to improve my appearance	29*	16
253. Not having enough social life	24*	12
256. Not entertaining often enough	25*	5
257. Spending too many evenings at home	13*	1
206. Too little chance to enjoy art or music	16*	7
161. Wishing I had a better educational background	16*	7
17. Lacking skill in sports and games	8	17*
158. Needing more outdoor air and sunshine	12	20
207. Little opportunity to enjoy nature	7	13

Self-improvement is considered a problem by both the veterans' wives and the students. Differences in the items marked, as well as written-in statements, indicate the need and desire for an improved social organization in the village, as well as some cultural and recreational program. Lecture series and discussion groups are strongly desired.

Items included in the area Personality represent the term *personality* used in the narrower, commonly used sense. The items listed in the percentage summary which follows are of

the type that one finds in so-called "personality tests," and are more direct and generalized reflectors of underlying anxieties, fears, depression, and so forth than other items in the List:

Personality

	Village	Student
216. Feelings too easily hurt	31	32
212. Constantly worrying	21	19
259. Unhappy too much of the time	9	8
167. Feeling blue and moody	20*	8
213. Too easily moved to tears	27*	15
214. Too nervous and high-strung	23*	2
20. Lacking self-confidence	17	29*
22. Being timid and shy	9	16
24. Taking things too seriously	9	18*
27. Daydreaming	7	17*
76. Worrying how I impress people	16	23
218. Feeling inferior	9	18*

The principal value of this area is found in the consideration of the individual rather than the group. The marking of a single item such as "Bothered by thoughts of suicide" or "Sometimes afraid of going insane" may reflect the need for individual treatment more strongly than marking of several other items. The modal items marked in this area may well reflect the generalized anxiety and insecurity that form a part of our subcultures. A comparison between the types of items marked by the two groups is interesting. Apparently there is greater hypersensitivity in the village group, while larger percentages of the student group manifest symptoms of inferiority feelings.

The items in the area Home and Family are for the most part applicable to both the single and married. Generally, items marked by single students reflect problems related to the paternal home, while those marked by the married group reflect problems related to the marital home. The percentage summary which follows shows that in this area, as in the personality areas, the particular pattern of problems marked by the individual is instructive in individual case work:

Home and Family

	Village	Student
180. Wishing I had a different family background	6	7
271. Worrying whether my marriage will succeed	9	7
225. Having clashes of opinion with my parents	5	9
276. Wanting to have a child	17*	9
32. Member of my family working too hard	17*	0
272. Having different interests from husband or wife	9*	0
179. Educational level different from my family's	6	12
35. Worried about a member of my family	6	15*
132. Being an only child	6	15*
177. Unable to discuss certain problems at home	1	19*
226. Parents sacrificing too much for me	1	23*

The modal courtship problems in the following percentage summary are, of course, marked by the single students:

Courtship

	Village	Student
89. Wondering if I really know my prospective mate	0	21
39. Deciding whether I'm really in love	0	21
40. Having to wait too long to get married	0	20
88. Needing advice about getting married	0	13
86. Deciding whether to become engaged	0	11
113. Disappointed in a love affair	0	8
37. Having too few dates	0	8
38. Not finding a suitable life partner	0	8
42. In love with someone my family won't accept	1	7

Certain courtship problems, however, marked by married persons, such as "In love with someone I can't marry" or "too deeply involved in a love affair," would be of interest to the counselor.

In the Sex area the modal problems of the two groups differ, as one would expect:

Sex

	Village	Student
233. Fear of having a child	9*	1
229. Being too inhibited in sex matters	8	7
280. Sexual needs unsatisfied	4	9
181. Petting and necking	0	9*
183. Wondering how far to go with the opposite sex	0	8*
231. Too easily aroused sexually	0	8*

The problems marked differently by the unmarried student group appear to be largely of a "moral" nature. Written-in statements indicate that much of the inhibition indicated by the village wives is blamed on the lack of privacy in living conditions.

Problems in religion are common in both groups:

Religion

	Village	Student
140. Wanting to feel close to God	9	7
142. Troubled by lack of religious faith in others	9	8
44. Confused in my religious beliefs	9	6
45. Losing my earlier religious faith	8	6
95. Science conflicting with my religion	6	8
139. Not going to church often enough	28*	16
144. Differing with my husband or wife over religion	11*	0
91. In love with someone of a different religion	0	8*

Written-in statements indicate that there is a substantial interest in both groups in discussions related to religion. Particular interest is shown in learning about faiths other than one's own. Village wives indicate that their failure to attend church, as often as they would like, results from the responsibilities of taking care of their children.

The differences in occupational problems between the two groups is fairly clear-cut:

Occupation	Village	Student
236. Getting no appreciation for the work I do	9*	1
239. Would rather be doing other kinds of work	9*	1
187. Lacking necessary experience for a job	0	17*
188. Not knowing how to look for a job	0	8*
189. Needing to know my vocational abilities	4	17*
191. Doubting the wisdom of my vocational choice	4	12*

The village group does not have the concern with vocational problems that faces the student group. The dissatisfaction with present work indicated by the village wives refers both to part-time employment and to the routine of household tasks.

EXAMINATION of the modal problems of the two groups reveals certain clear-cut differences between them. Some of these differences were anticipated on a priori grounds. Many of these differences were brought out even more clearly by further examination of the written-in summaries on the back of the inventory.

Despite the presence of counseling facilities and remedial agencies on the University campus for the use of the student group, many students are apparently unaware of the availability of agencies other than the health service and dental clinic. It would be well to give wider publicity to the other agencies, so that they may be of greater service to the student body in helping them to solve their problems. The present survey suggests that the making available of University health counseling and other service facilities to members of the village group would be both desired and desirable.

In answer to the question, "Would you like to talk over your problems with a counselor if one were available?" 28 per cent of the village group checked "yes," 55 per cent checked "no," 17 per cent checked neither. The proportion of those desiring counseling increased with the number of problems checked on the Check List. All those marking more than 50 items desired counseling.

In answer to the question, "Would you like to see certain problems made into topics for general discussion in a group meeting?" 42 per cent checked "yes," 36 per cent checked "no," and 22 per cent checked neither. Again, the proportion

[*Continued on page 224*]

EDITORIAL COMMENT

The Chief State School Officers' Platform

THE statement of principles adopted by the National Council of Chief State School Officers at its meeting in December, 1949, and published early this year[1] is a noteworthy document. It "is intended to serve as a guide for the improvement of education programs throughout the Nation, with particular attention to responsibilities of State departments of education for such improvement." It presents the views of the organization clearly and concisely in outline form. Since the statement is so brief and at the same time so comprehensive, it includes practically no argument or discussion; it is a simple statement of views on the wide variety of matters with which it deals. A full elaboration of the points included would make a good-sized book.

The statement calls for a program of elementary and secondary education that will "serve the common and peculiar needs of all children and youth and the special needs of exceptional children and youth," utilize fully "all school and community resources," and "prepare all students either to enter college or to enter successfully upon and to make satisfactory progress in an occupation." It demands free public community colleges providing both general and vocational education. It insists that vocational and other special programs "be integral parts of a total education program designed to help every individual achieve personal, social and occupational competence." It points out the responsibility of each state to provide higher public education, "accessible without regard to race, creed, sex, or national origin," and calls for state systems of undergraduate and graduate scholarships and broad programs of adult education.

In the opinion of the authors, financing the educational program is a joint responsibility of local, state, and Federal governments. The state should provide a foundation program

[1] *Our System of Education: a Statement of Some Desirable Policies, Programs and Administrative Relationships in Education.* Washington, D. C.: National Council of Chief State School Officers, 1950.

"which will guarantee that every child shall have at least an adequate foundation education opportunity." The Federal government should provide funds "to supplement State and local funds to the extent necessary to enable each State to finance an adequate foundation program of education after reasonable local and State efforts have been made." The Federal government should not deal with schools directly but with chief state school officials.

On all these points and many others, there is fairly general agreement among members of the education profession, at least those in public education. But the Council takes positions on more controversial matters. It is flatly opposed to state or Federal support of nonpublic educational institutions. "Federal and State financial assistance for education, whether for current expense, capital outlay or school-connected auxiliary services should be restricted to tax-supported and publicly controlled school systems and institutions of higher education." Any Federal scholarships should be tenable in either public or private institutions but should "provide similar amounts for the purchase of similar services in either public or private colleges or universities."

Like most students of educational administration, the Council favors nonpartisan state boards of education whose members serve for long overlapping terms and select the chief state school officers. But, unlike most such students, it favors the popular election rather than the appointment of members of the Board.

The Council also agrees with most students of educational administration in advocating larger functions and a higher administrative status for the United States Office of Education. It would go to the extent of making the Office "an independent agency of the Federal government under the general direction of a board of laymen." The members of this board would be appointed by the President on a nonpartisan basis for long overlapping terms; approval by the Senate is not mentioned. The Board would select the Commissioner of Education, who would be responsible to it. The wisdom of giving the Office of Education this degree of independence seems highly doubtful. It would be interesting to know how general the consensus was concerning this proposal and the recommendation for popular election of state boards of education.

[*Continued on page 224*]

READINGS

Books to Read

JERSILD, ARTHUR T.; WOODYARD, ELLA S.; AND DEL SOLAR, CHARLOTTE. *Joys and Problems of Child Rearing.* New York: Teachers College, Columbia University, 1949. xiv+235 pp. (Written in collaboration with Ernest G. Osborne and Robert C. Challwan).

It is heartening indeed to come upon a study which deals with the cheerful side of parenthood along with the headache-producing areas. This study contains the results of interviews with parents representing 544 families and 1,137 children. The interviews were conducted by twelve persons, and were of an informal nature. Parents were simply encouraged to talk about their children, and the interviewer took notes, which were later dictated to a secretary and analyzed. The parents were reached through schools, churches, and other organizations, and participated on a voluntary basis. The families represented four different income levels, and all were above average in educational status.

The findings indicate that "the satisfactions involved in being a parent outweigh in emphasis and outnumber in frequency the sources of dissatisfaction or distress" (page 116). Even though this may merely indicate that parents think they should enjoy their children, and therefore say they do, the authors contend that the study indicates the rewarding nature of parenthood. Parents, apparently, need the affection of their children as much as children need to feel loved and wanted by their parents. Nothing is gained by "blaming" a parent when a child feels "rejected." The parent of such a child is also in an unhappy state and needs help.

A high incidence of dissatisfactions was reported in the management of routines—feeding, sleeping, elimination, and so on. Only a small percentage of parents mentioned having used sources of help in this area. It would seem that much of our present literature in this field is not of practical value to parents. The authors suggest that there is need for more studies of the practical aspects of day-by-day dealings between parents and children in the home. The relation between the many details of managing a home and the emotional problems of the parent-child relationship are obvious but have not been the subject of much study.

The authors of this very revealing investigation indicate the need for more realistic studies of the home situation if parents are to receive practical help in solving their problems.

AMALIE K. NELSON

SPEARS, HOWARD. *The High School for Today.* New York: American Book Company, 1950. xiv+380 pp.

The very title of this book should present a challenge to educators and taxpayers alike to examine once again the schools of our country and further intensify efforts toward a public high school which is truly "for today."

According to the author, this volume is written for both beginning and

experienced teachers who are concerned with where the modern high school is going and where it has been. Major emphasis is centered in Parts II (The Curriculum and the Student) and III (The Teacher and the School), where the author devotes well over half of the total volume to a most thorough discussion of these topics. "Learning to Do by Doing," "Guidance and Learning," and "Democratic Leadership" are chapter titles which give indication of the concern which the author manifests for modern educational concepts.

The author draws heavily from a rich background of experience in both secondary and higher education to bring a desired quality of professional "know how" into this work. Cartoons, "thrown in because the author likes to draw them," aid greatly in pointing up significant ideas. A possible criticism of the book may be the complete omission of bibliographies, both end of chapter and general.

GAIL SHANNON

HAMMOND, CARSIE. *Teaching Agriculture.* New York: McGraw-Hill Book Company, Inc., 1950. vii+353 pp.

This book is designed for teachers and prospective teachers of agriculture. In content it combines psychology, philosophy, and methods of teaching. This reviewer finds little to criticize in the application of psychology made here. In the presentation of a philosophy, however, he would favor a more detailed discussion of objectives for teachers of vocational agriculture. In particular, he would ask for a more helpful discussion concerning the development of ideals and goals, a great deal more help in the development of interests, a more specific analysis of understanding, enriched with illustrations, at least a challenge to the encouragement or stimulation of creative thinking and, certainly, so far as vocational agriculture is concerned, a more emphatic presentation of managerial abilities as the basis of success in farming. In this connection, of course, problem-solving becomes of major importance, since problem-solving or decision-making is the essence of managerial ability. Yet the writer fails to give detailed illustrations of good problem-solving; rather, he follows the procedure set forth by Dewey, telling what but not how. What student was ever able to solve his own problems from a reading of Dewey's presentation?

Beyond the field of methods in classroom procedure, the writer does very well in analyzing the procedure used in developing farming programs, advising the Future Farmers of America, instructing young farmers and adult farmers, and so on. Adequate examples are found in many of these discussions.

This book should render a service to any teacher of vocational agriculture and might well serve to present procedures in teaching for students in training to appraise critically.

W. F. STEWART

MORRIS, FRED C. *Effective Teaching: a Manual for Engineering Instructors.* New York: McGraw-Hill Book Company, Inc., 1950. ix+86 pp.

This manual prepared by a committee of the American Society for Engineering Education represents a highly commendable and professional piece of work. Of particular interest is the status given the professional engineer as a member of society and a worker. The basic social philosophy,

psychology, and purposes presented reflect modern educational thought and practice.

Throughout the manual emphasis is placed on the importance of achieving the objectives set forth. To this end many helpful suggestions as to ways and means are presented. Many teaching aids are suggested and recommendations made as to their limitations and proper use, and other helpful suggestions feature ways and means whereby teachers of engineering subjects can increase their teaching effectiveness. Planning and continuing re-evaluation and reorganization of curriculums, purposes, methods, and content are recognized as essential factors to be observed and applied to programs designed to meet the changes and demands constantly taking place in a dynamic society.

Another interesting feature is the emphasis given tests and measurements as teaching aids, as against their arbitrary use as a basis for awarding marks—a use still widely prevalent in all areas of education. This manual is a distinct contribution to engineering education and may be studied with profit by all teachers regardless of their spheres of interest.

ROBERT E. SMITH

LEE, J. MURRAY, AND LEE, DORRIS MAY. *The Child and His Curriculum.* New York: Appleton-Century-Crofts, Inc., 1950. xvi+710 pp. (Second Edition).

The college student's frequent complaint that a "revised" or "second" edition of a textbook means chiefly the difference between new-book cost and the price on used-book shelves is definitely inappropriate in the case of this book. It is quite appropriately termed a "second edition" rather than a "revised edition" for a number of reasons. The decade since the appearance of the original edition has brought increased data on child development, further evidence of the effective results of functional methods and refinements in teaching procedures. Much of the material of these ten years is included in Lee and Lee's second edition. The text, footnotes, and "selected references" show ample evidence of careful work in preparing the volume.

In this second edition, the authors wisely preserved the organizational framework of the original book. It is divided into two parts. The first includes five chapters on changing educational objectives, the nature of the child as a growing organism, the rôles of emotion and interest, and the behavior of children as learners. Part II is devoted to the various specialized experiences composing the child's curriculum, containing nine chapters on the curriculum, the unit of work, materials of instruction, social experiences, language experiences, number experiences, and a concluding chapter on "Evaluating Changes in the Child." Especially good is Chapter 3, "The Child and His Developing Emotions," which could be read with profit by most parents as well as teachers.

It is a long book, but a comprehensive one, written from a point of view favoring organismic interpretations of the psychology of learning, cooperatively democratic planning of school work, and functional experiences as methods. The volume has consistency in point of view throughout. This consistency is especially noteworthy in view of the extensive use of quotations and the selection of materials from many and varied sources.

Just as the first edition was favorably received and put to use extensively, so should this second edition find an enthusiastic audience. It should prove

particularly helpful to principals and supervisors as they work in in-service programs to improve the quality of instruction. It will also be useful in interpreting the program of the modern elementary school to secondary-school teachers, as well as in serving as a general reference volume for professional courses on teaching methods.

LOWRY W. HARDING

McVEY, FRANK L. *The Gates Open Slowly: a History of Education in Kentucky*. Lexington, Kentucky: University of Kentucky Press, 1949. x+321 pp.

The author is a competent historian who helped to make some of the history he writes; the book is a readable, documented, conservative history of education in Kentucky. A model for the writing of good state histories, it shows the hard work and time required to establish public education in American states (in Kentucky until 1904) and that Cubberley's "seven battles" have to be fought continuously, and it puts a firm basis of historical facts under its propaganda for the maintenance, aggrandizement, and improvement of public education in Kentucky.

The gates have opened slowly because: Virginians imported the Anglican traditions of *laissez faire* and educational privilege, rugged individualism, springing from frontier simplicity, bred obscurantism and disdain for formal education, religious fundamentalism and sectarianism have persisted, slaveholding evolved a dual system of education, agricultural and rural life and traditions predominate, and most social and individual wealth is concentrated in a few urban industrial areas. The author asserts that most of the recent building improvements stem from WPA and PWA aid.

Some of the fascinating contents include the story of Transylvania, Center, and Berea Colleges, the University of Kentucky and the University of Louisville ("first" municipal university), efforts to remove the color line, Kentucky's narrow escape from an anti-evolution teaching statute, and the attack on illiteracy through "whirlwind campaigns," moonlight schools, and the Bureau of Adult Education in the State Department of Education established in 1920.

CLARKE L. FOSTER

COOK, LLOYD ALLEN, AND COOK, ELAINE FORSYTH. *A Sociological Approach to Education*. New York: McGraw-Hill Book Company, Inc., 1950. xii+514 pp.

This book consists of an extensive revision of Lloyd Allen Cook's *Community Backgrounds of Education*. Contrasting the original book with the revised edition, one finds a greater emphasis placed in the latter volume upon the operation of social class in community life. This emphasis is ably applied to an analysis of the school community, and means are suggested for mitigating the adverse effects of social stratification upon the lives of pupils within the school environment.

The authors stress the importance of the presence of core values within a culture, and they indicate ways in which the school can equip pupils with a command of processes of acquiring unity of purpose within group life.

The scope of the book is indicated by the authors' statement of purpose: "Our concern has been with the total educative process in school and outside, wherever people learn, and our business has been the practical one of helping them solve issues which interfere with the achievement of group goals" (page 10).

The breadth of topics considered in the book has necessitated an overview treatment rather than an exhaustive analysis. Problems are clearly posed and guide lines are suggested for their solution. Extensive use is made of case studies for the purpose of clarifying the authors' position.

ROBERT E. JEWETT

WOODWORTH, HUGH. *The Nature and Technique of Understanding: Some Fundamentals of Semantics.* Vancouver, British Columbia: Wrigley Printing Company, Ltd., 1949. vi+152 pp.

This small work falls outside the pattern of recent studies in semantics. In its willingness to discuss mental phenomena, the book shows greater sophistication than many current sectarian contributions to semantics. In its subject-matter, it clearly distinguishes itself from recent research in the theory of signs and pure semantics. *The Nature and Technique of Understanding* is a brief study of certain psychological considerations concerning perception and understanding, carried on at the armchair level.

The book opens with a treatment of consciousness, but hastens on to its central notion, namely, *freelings.* By freelings, Woodworth means the important feelings that accompany sense impressions. Subsequent chapters consider the topic's meaning, verbal meaning, dynamic experience and the kinesthetic sense, kinesthetic freelings, and induced experience.

It turns out that, for Woodworth, "to understand is to experience—nothing less and nothing more" (page 99). That is to say, understanding is synonymous with induced experience, which "consists of the stream of consciousness encountered in reverie or thought" (page 72).

In the concluding chapter, Woodworth treats "the greatest of all mysteries relating to language and meaning—the mystery of how it is that verbal meaning is intelligible" (page 130). According to the author, this mystery is also rendered less mysterious if we but examine the deeper rôle of freelings, particularly their rôle with respect to dynamic experience.

VIRGIL HINSHAW, JR.

* * *

A Test of the Pre-School Child's Familiarity with Measurement

[*Continued from page 208*]

requires the cup and pint measures and the water. The questioner says: "I should like to know how many of these (pointing to the cup) it takes to fill that (pointing to the pint pitcher). Can you use the water to find out?" We have been surprised to find that most of the children can do this. Some, of course,

fill the pint pitcher directly from the pitcher of water. No indication of an unsatisfactory answer is given; our purpose is not to teach but to test information. The interviewer smiles and says "Thank you" just as pleasantly to a five-year-old who fills the pint pitcher and indicates that he does not understand the intermediate step in measuring, as she does to the three-year-old who carefully and exactly fills the cup and says as he starts to fill the cup a second time: "I'll bet two," holding up two fingers. His gesture, of course, shows that his counting is still in the tally stage, but he is adequately using in this problem situation the measuring technique which he has seen others use.

The second practical test uses long measure. The interviewer says "Should you like to find out how tall you are?" The directions continue:

> To do this you ask the child to face a wall surface on which you will mark his height, laying the foot rule flat on the top of his head. Then give him the yardstick and the foot rule and say: Can you use these to show me just how tall you are? If he overlaps the yardstick with the foot rule without help, you say: Can you find out just how tall that is? and you record whether he knows inches and can count them.

The youngest children who do this adequately often cannot see the inches or count them. Others do it adequately with help in counting. Several five-year-olds counted the additional inches on the foot rule beginning with 37.

Money is familiar to all the children. Only one three-year-old called the assortment "pennies." All know its use. The three-year-olds are specific in their answers to the question, "What do we use it for?" The answers take the form "to get groceries, gas, toys, yummies, snowsuits," and the like. The four- and five-year-olds say "to buy things." The penny and dollar bill are most often named, then the nickel and the dime. The questions, How many pennies will the man in the bank give you for a nickel? . . . a dime? and . . . nickels for a dime? are not often answered.

This is an interview test. The average time required is about 20 minutes. We are interested to find out what large numbers of pre-school and first-grade children know about measurement. We shall be glad to send copies of the test to teachers who are interested to interview some of their pupils if they will follow the directions carefully and return the filled-in blanks to us for use in evaluating the test.

The Problems of Two University Populations

[*Continued from page 215*]

of those desiring group discussion increased with the number of problems checked on the Check List. All those marking more than 40 items desired group discussion. A variety of topics for group discussion were suggested. The modal topics dealt with raising children, cultural subjects, current events, religion, and budgeting.

Problem surveys of the present type result in a greater understanding of the needs of the groups surveyed. This is particularly true when data is available from groups of known character, so that problems may be compared from group to group. Needed facilities for the correction of problems may be suggested from such surveys and, when such facilities already exist, greater publicity regarding them and methods of utilizing them may be indicated. Surveys of this type attain their maximum value when interpreted in the light of what is already known about the particular group being surveyed, and when the free written-in statements are critically reviewed.

The Chief State School Officers' Platform

[*Continued from page 217*]

The points mentioned are only a few covered in the document. As already indicated, most of them are not new; but because they have been brought together and presented in concise outline form, the statement will serve a useful purpose. Whether or not one agrees with all the views expressed in the statement, he must recognize that it represents a great deal of careful work and that its publication is a public service.

R. H. E.